

[54] TURBINE EXHAUST CASE DESIGN

[75] Inventors: Fred L. Honeycutt, Jr., Lake Park;
Erik A. Lindstrom, Palm Beach
Gardens, both of Fla.

[73] Assignee: United Technologies Corporation,
Hartford, Conn.

[21] Appl. No.: 328,565

[22] Filed: Dec. 8, 1981

[51] Int. Cl.³ F01D 9/02

[52] U.S. Cl. 415/142; 415/139

[58] Field of Search 415/136, 137, 139, 142;
60/39.5, 39.32, 271

[56] References Cited

U.S. PATENT DOCUMENTS

| | | | |
|-----------|---------|----------------------|-----------|
| 2,938,336 | 5/1960 | Peterson | 60/39.5 |
| 3,028,141 | 4/1962 | Nichols | 415/137 |
| 4,274,805 | 6/1981 | Holmes | 415/139 X |
| 4,304,522 | 12/1981 | Newland | 415/142 X |
| 4,384,822 | 5/1983 | Schweikl et al. | 415/138 X |

Primary Examiner—Everette A. Powell, Jr.
Attorney, Agent, or Firm—Stephen E. Revis

[57] ABSTRACT

According to a preferred embodiment of the present invention, a stage of turbine exhaust exit guide vanes is supported at their outer ends by attachment to the outer turbine exhaust case in a manner permitting upstream and downstream rocking of the vanes, while the inner vane ends engage the upstream end of a sheet metal fairing which defines the radially inner surface of the exhaust gas flow path. The fairing is cantilever supported at its downstream end and is spaced radially outwardly from the inner turbine exhaust case. The inner vane ends are free to move radially relative to the fairing which provides only axial support therefor. Hollow struts disposed immediately downstream of the guide vanes extend between the inner and outer exhaust cases and pass through openings in the fairing which is preferably corrugated in the axial direction to reduce vibration.

5 Claims, 3 Drawing Figures

